FIG 1
(PRIOR ART)

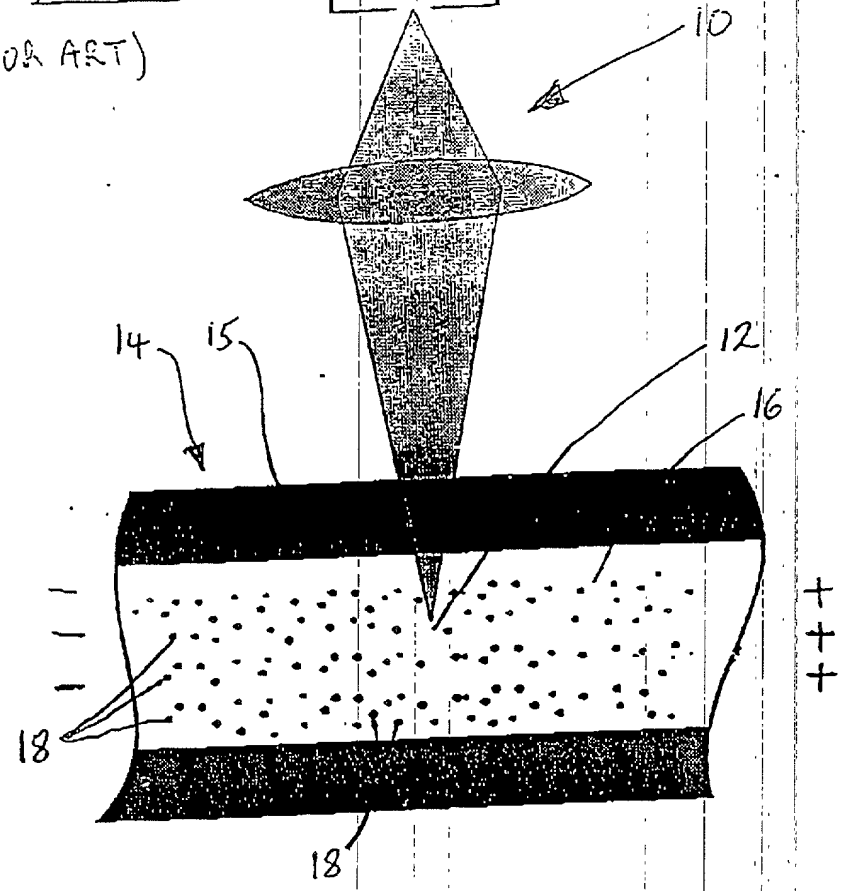
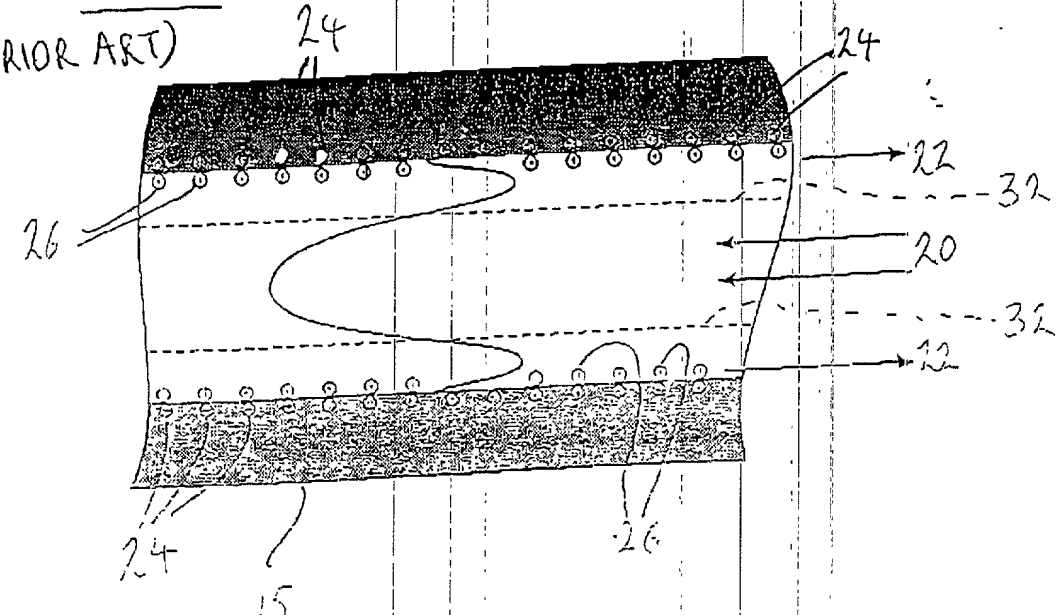
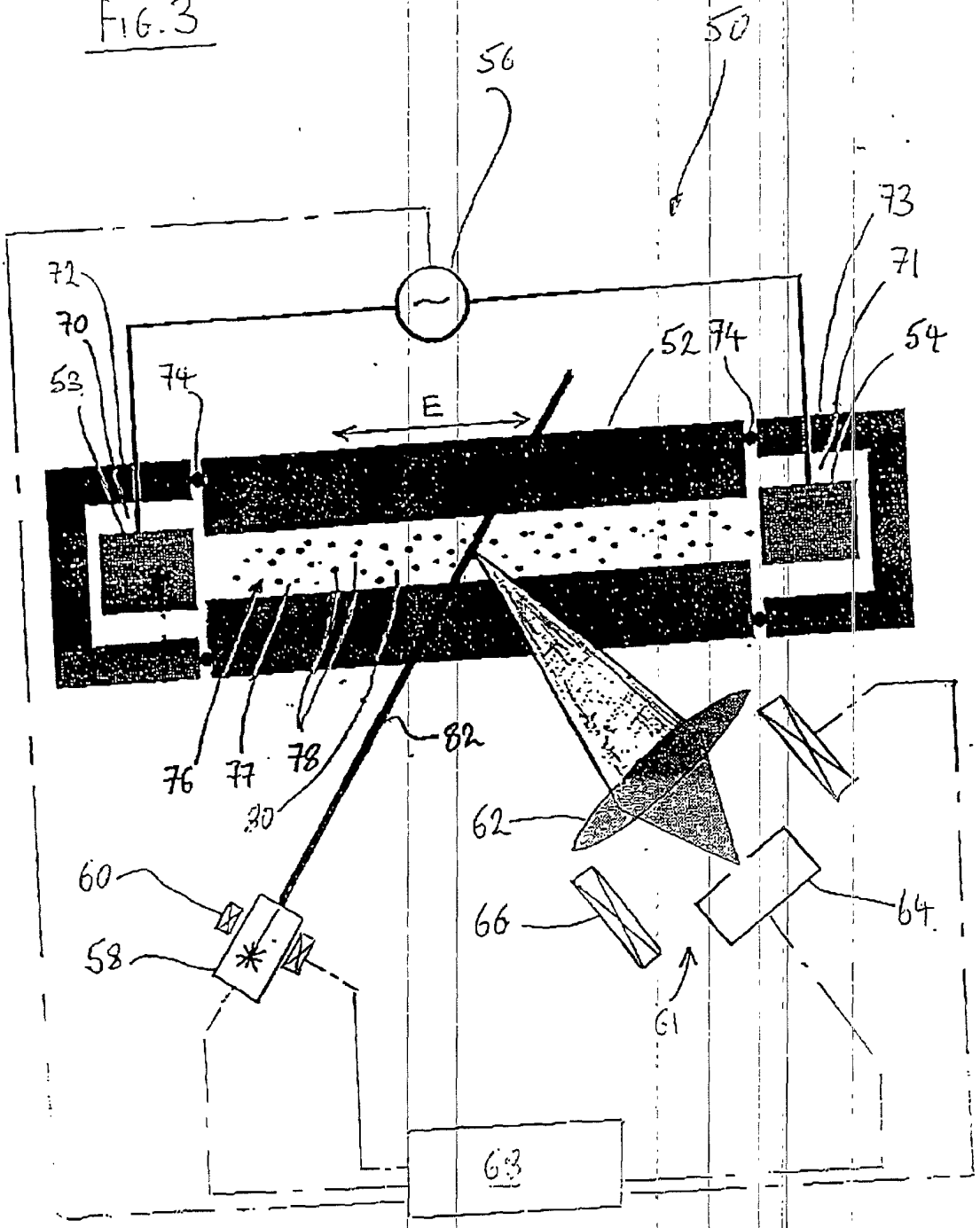


FIG 2
(PRIOR ART)



SUBSTITUTE SHEET (RULE 26)

FIG. 3



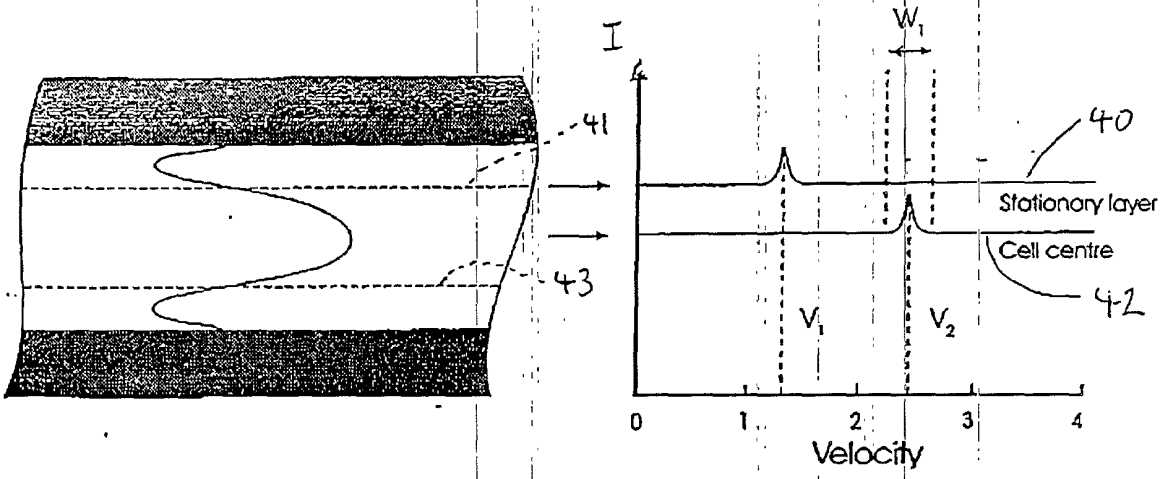

I
W1
41
40
Stationary layer
Cell centre
43
42
V1
V2
0
1
2
3
4
Velocity

FIG. 4

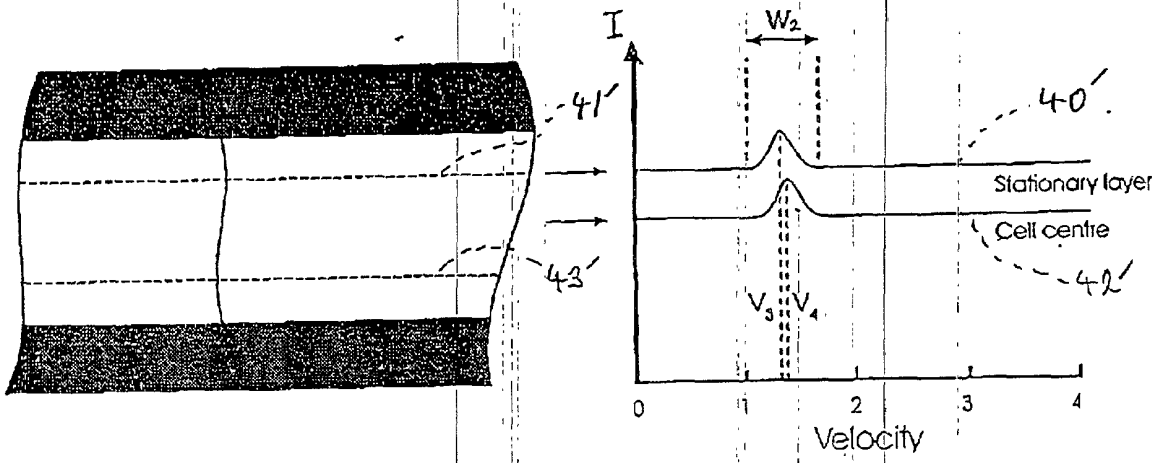

I
W2
41'
40'
Stationary layer
Cell centre
43'
42'
V3
V4
0
1
2
3
4
Velocity

FIG. 5

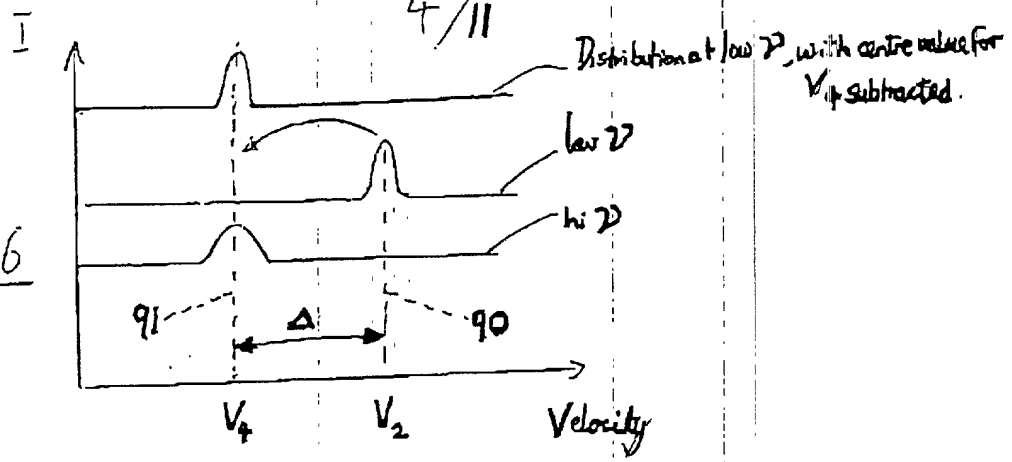


FIG.6

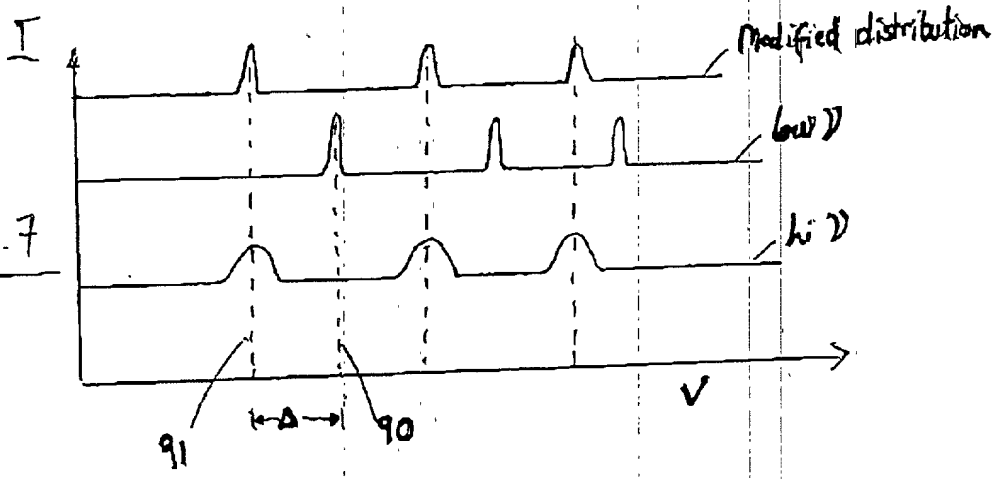


FIG.7

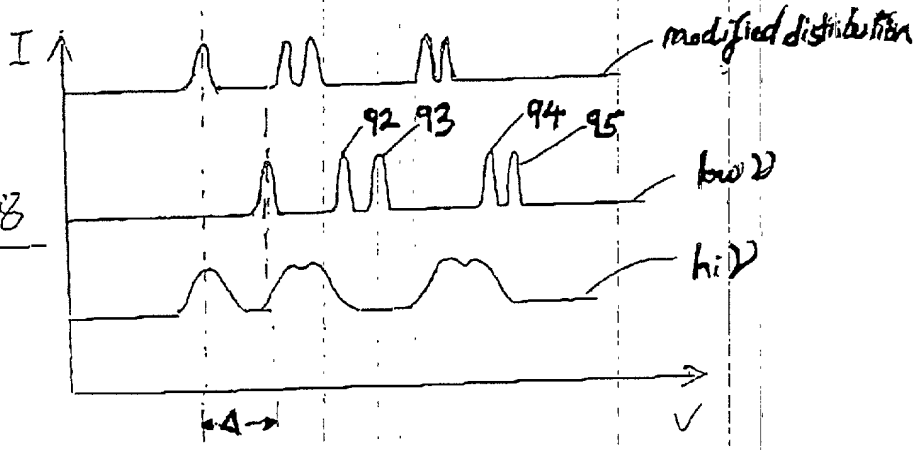


FIG.8

SUBSTITUTE SHEET (RULE 26)

FIG 10A

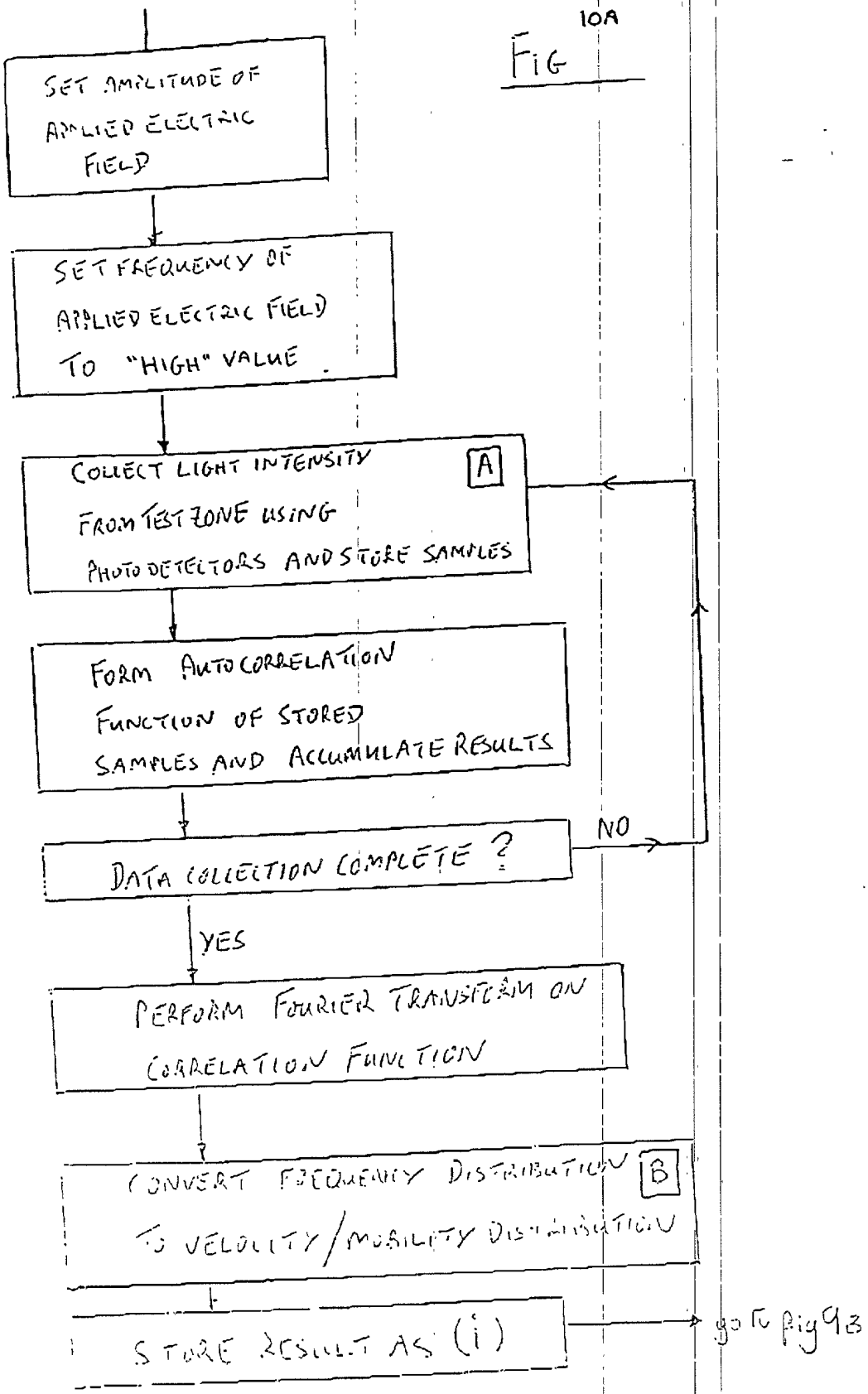

SET AMPLITUDE OF APPLIED ELECTRIC FIELD
SET FREQUENCY OF APPLIED ELECTRIC FIELD TO "HIGH" VALUE
COLLECT LIGHT INTENSITY FROM TEST ZONE USING PHOTODETECTORS AND STORE SAMPLES
A
FORM AUTOCORRELATION FUNCTION OF STORED SAMPLES AND ACCUMULATE RESULTS
DATA COLLECTION COMPLETE ?
NO
YES
PERFORM FOURIER TRANSFORM ON CORRELATION FUNCTION
CONVERT FREQUENCY DISTRIBUTION TO VELOCITY/MOBILITY DISTRIBUTION
B
STORE RESULT AS (i)
go to Fig 9B

FIG 10B

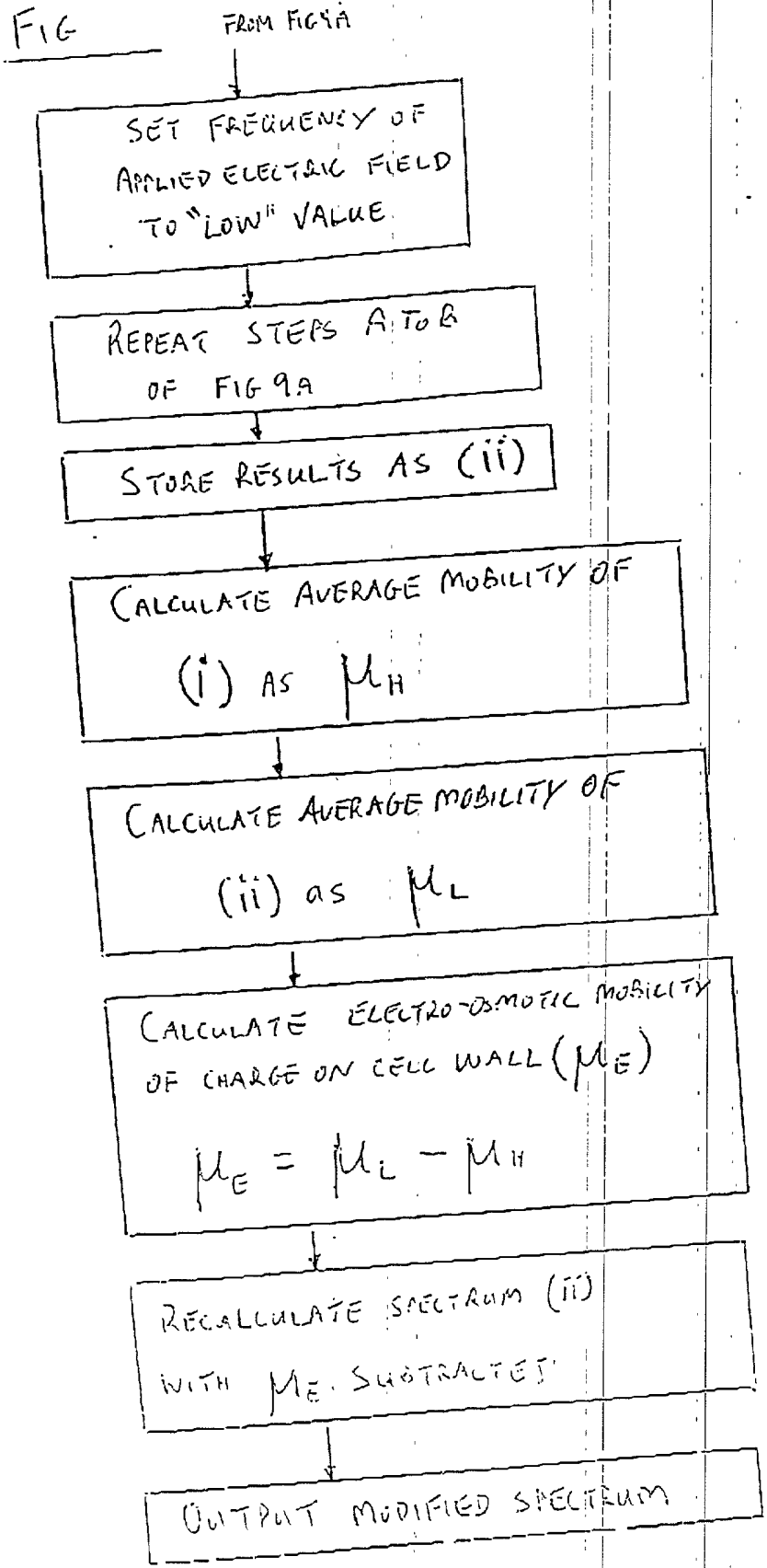


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FIG 11

EQUATIONS

a) MOBILITY μ = $\dfrac{\text{Velocity of Particle } (V)}{\text{electric field } (E)}$

b) $$\bar{\mu} = \frac{\int_{-\infty}^{+\infty} \mu f(\mu) d\mu}{\int_{-\infty}^{+\infty} f(\mu) d\mu}$$

where $f(\mu)$ = mobility spectra

c) electroosmotic mobility $\mu_E = \bar{\mu}_L - \bar{\mu}_H$

where μ_L = particle mobility at low frequency applied electric field.

and μ_H = particle mobility at high frequency applied electric field.

d) $$f'(\mu) = f_H(\mu + \mu_E)$$

where $f'(\mu)$ is the corrected form of the particle mobility distribution function

FIG 12A

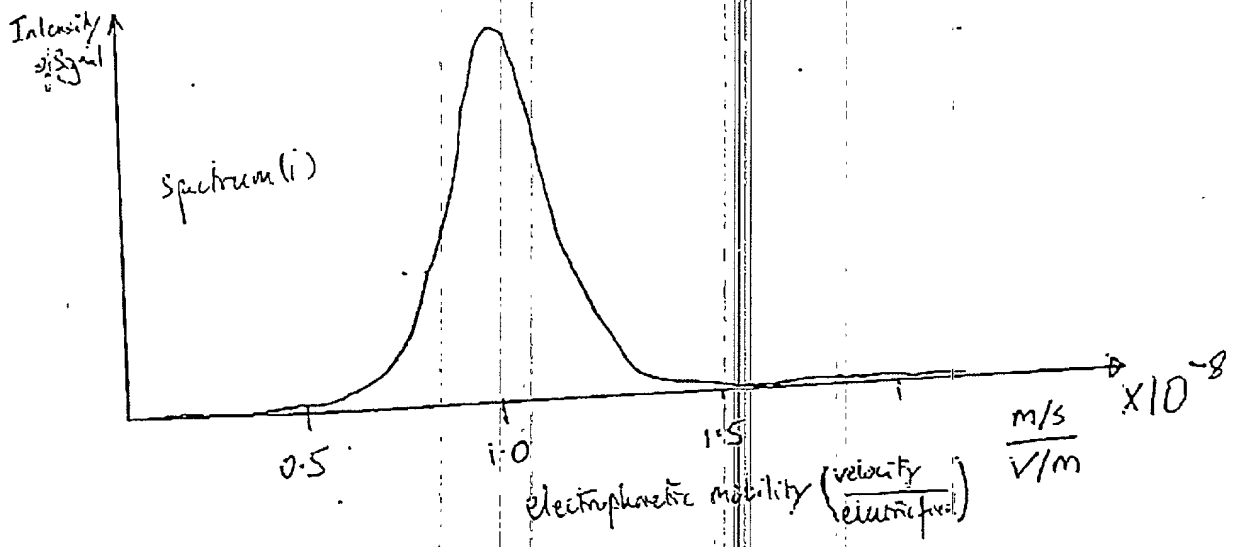
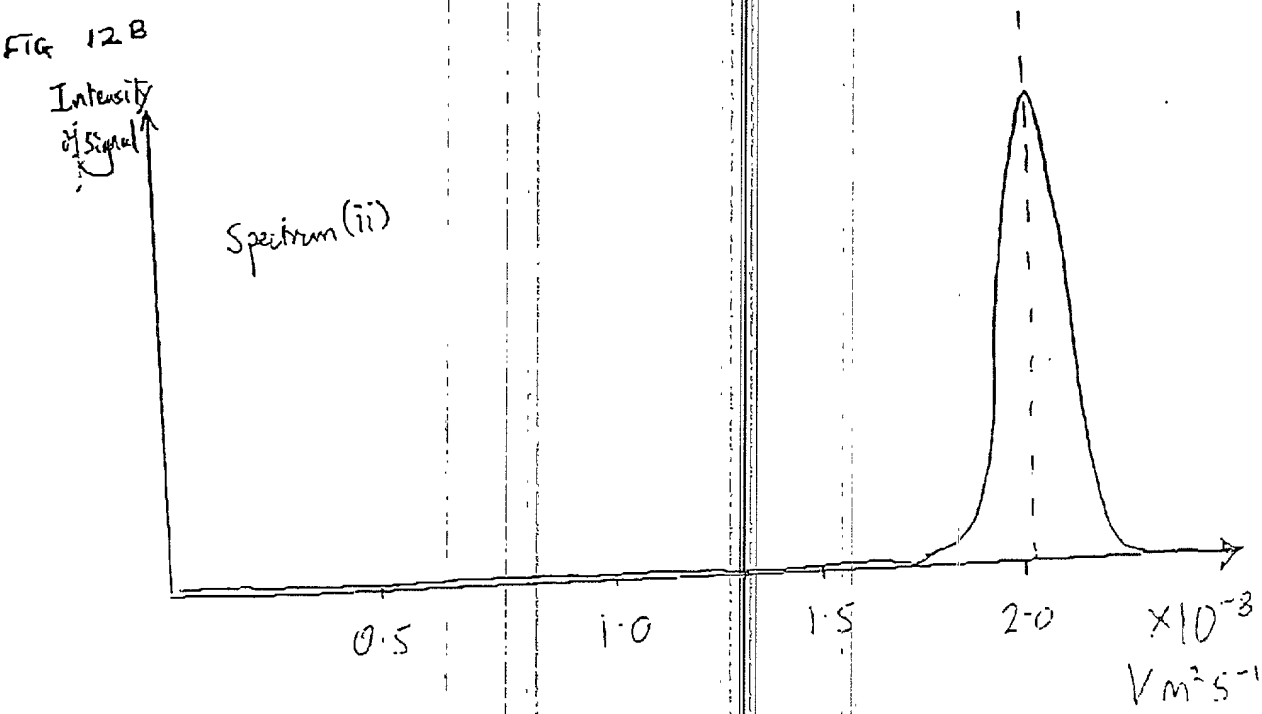


FIG 12B



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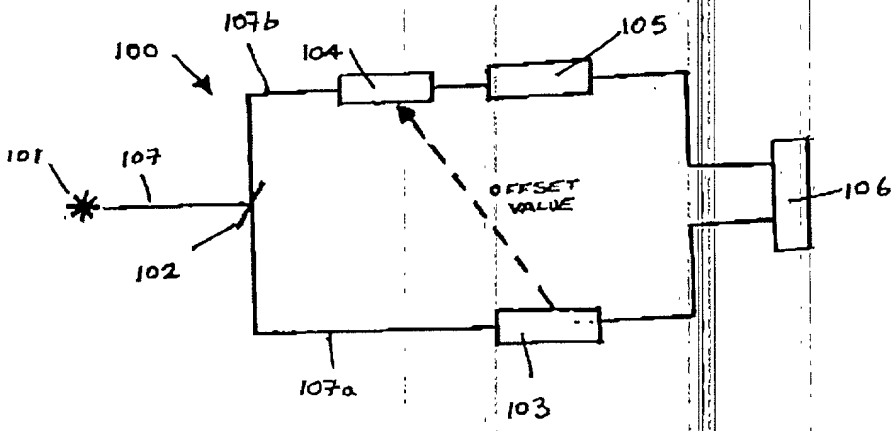

Figure 9

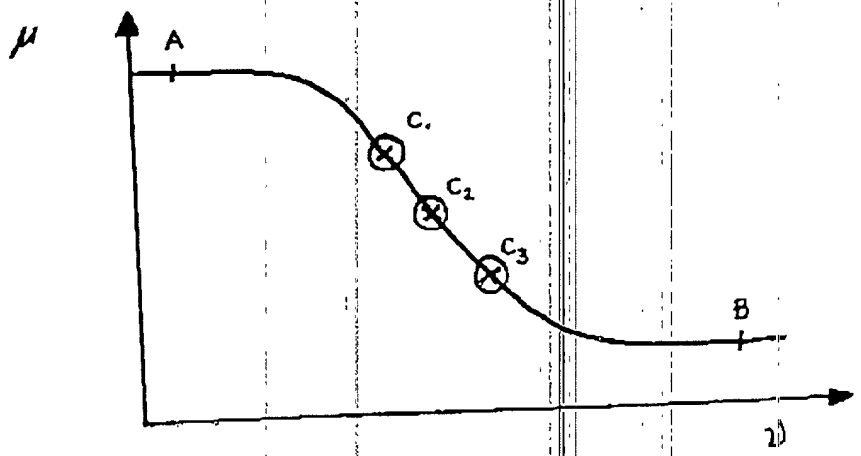

Figure 13

Document Page

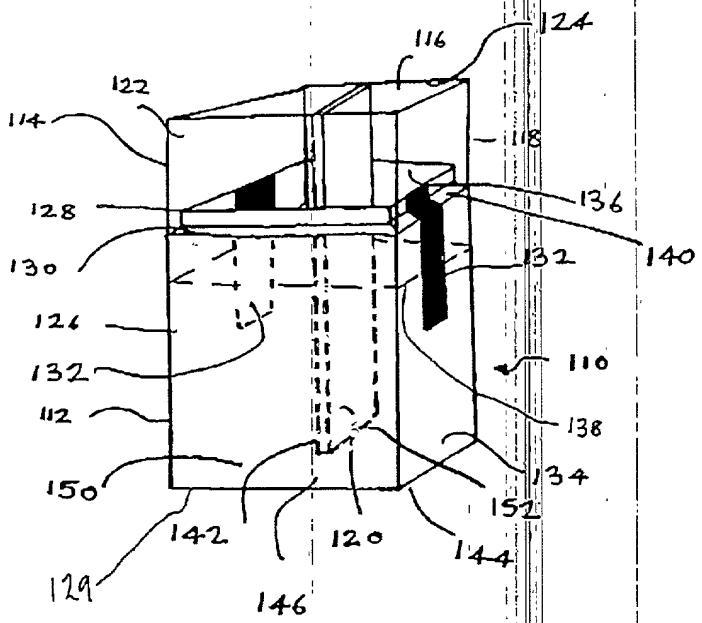

Figure 14

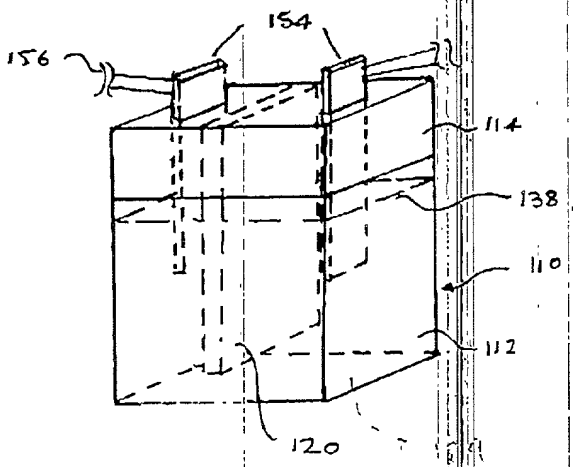

Figure 15

Replacement Sheet

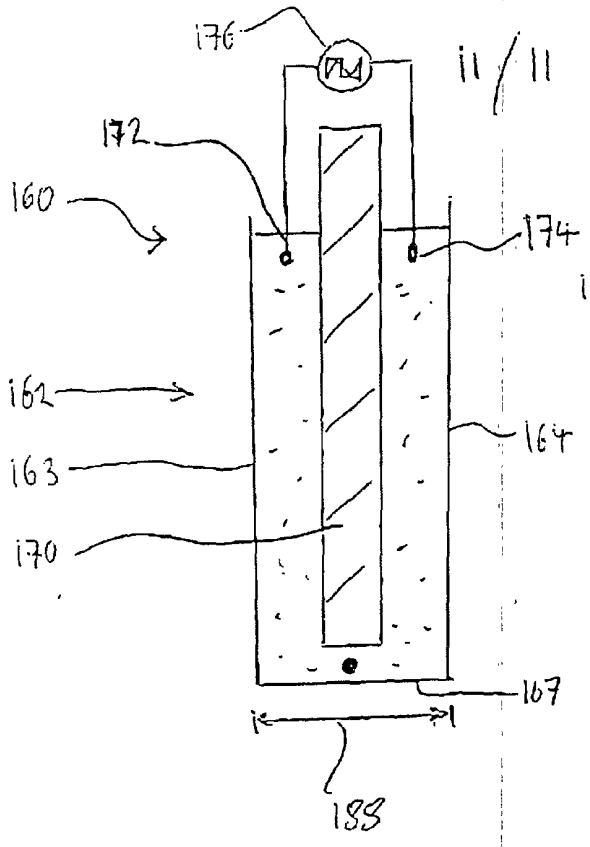

FIG. 16A

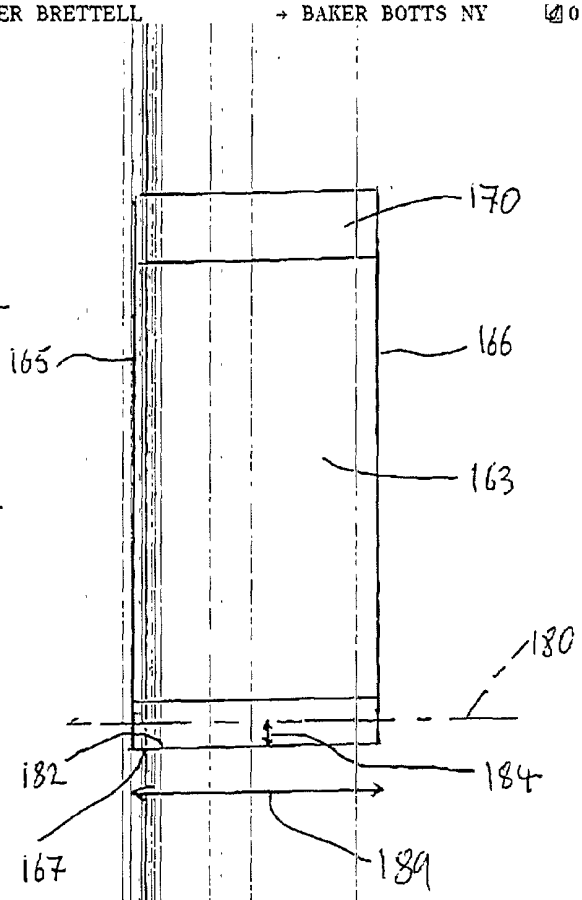

FIG. 16B